
Release 2.1D John F. Collins, Biocomputing Research Unit.
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(TW)

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Msrch_bp protein - protein database search, using Smith-Waterman algorithm
on: Wed Aug 20 09:40:58 1997; MasPar time 10.81 Seconds
424.532 Million cell updates/sec
Tabular output not generated.

Title: >US-08-469-637A-2
Description: (1-401) from US08469637A.pep (1 of 2)
Perfect Score: 3030
Sequence: 1 MNKLCCALVFLDISIKWTT.....QKLEEMIGNOVQSVKISCL 401

Scoring table: PAM 150
Gap 11

Searched: 96640 seqs, 11439865 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: a-geneseq27

1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part10 10:part11 11:part12 12:part13 13:part14
14:part15 15:part16 16:part17 17:part18 18:part19
19:part20 20:part21

Statistics: Mean 34.492; Variance 143.083; scale 0.241

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description	Pred. No.
1	3024	99.8	401 20	R99925	Full length osteoclas	2.31e-295
2	3010	99.3	401 20	R99932	Mutated OCIF, OCIF-C2	6.52e-284
3	3010	99.3	401 20	R99931	Mutated OCIF, OCIF-C1	6.52e-284
4	3006	99.2	401 20	R99933	Mutated OCIF, OCIF-C2	1.69e-293
5	3003	99.1	399 20	R99942	Mutated OCIF, OCIF-CL	3.46e-293
6	3004	99.1	401 20	R99934	Mutated OCIF, OCIF-C2	1.84e-293
7	2996	98.9	401 20	R99935	Mutated OCIF, OCIF-C2	1.84e-293
8	2957	97.6	393 20	R99948	Mutated OCIF, OCIF-CB	2.03e-288
9	2861	94.4	380 20	R99924	Mature osteoclastogen	1.79e-278
10	2644	87.3	351 20	R99943	Mutated OCIF, OCIF-CC	5.25e-256
11	2539	83.8	321 20	R99936	Mutated OCIF, OCIF-CC	3.84e-245
12	2394	79.0	321 20	R99949	Mutated OCIF, OCIF-CC	3.78e-230
13	2282	75.3	360 20	R99938	Mutated OCIF, OCIF-DC	1.42e-218
14	2242	71.0	359 20	R99939	Mutated OCIF, OCIF-DC	1.92e-214
15	2218	70.2	359 20	R99937	Mutated OCIF, OCIF-DC	1.77e-212
16	2084	68.8	327 20	R99941	Mutated OCIF, OCIF-DD	3.91e-198
17	2078	68.6	272 20	R99944	Mutated OCIF, OCIF-DD	1.63e-197
18	1722	56.8	326 20	R99940	Mutated OCIF, OCIF-CD	7.68e-161
19	1533	50.6	197 20	R99945	Mutated OCIF, OCIF-CD	2.01e-141
20	1468	48.4	187 20	R99950	Mutated OCIF, OCIF-CB	9.36e-135

21	1151	38.0	143 20	R99946	Mutated OCIF, OCIF-CC	2.44e-102
22	1093	36.1	145 20	R99930	Osteoclastogenesis in	1.98e-96
23	1095	36.1	154 20	R99929	Osteoclastogenesis in	1.24e-96
24	858	28.3	106 20	R99947	Mutated OCIF, OCIF-CC	1.36e-72
25	665	21.9	84 20	R99951	Mutated OCIF, OCIF-CP	3.42e-53
26	405	13.4	183 15	R77421	Bampt delat53 nerve g	1.55e-27
27	405	13.4	183 15	R77421	40KD TNF inhibitor pr	1.55e-27
28	401	13.2	461 14	R12504	p75 Tumour Necrosis F	3.79e-27
29	398	13.1	461 14	R11141	Human TNF-R deduced f	7.40e-27
30	398	13.1	461 8	R24058	Fibroblast derived TN	7.40e-27
31	398	13.1	485 2	R24016	Sequence of a recombi	4.39e-26
32	390	12.9	518 10	R51003	Human protein TNFR	4.39e-26
33	375	12.4	474 2	R11142	TNF-R deduced from mt	1.23e-24
34	366	12.1	461 10	R31002	Sequence of human tum	9.04e-24
35	323	10.7	392 2	R11605	Human 75KD TNF-bindin	1.16e-19
36	301	9.9	277 8	R38859	CD40 protein.	1.41e-17
37	269	8.9	326 5	R27866	Myxoma virus T2 prote	1.40e-14
38	269	8.9	326 15	R85072	Myxoma virus T2 prote	1.40e-14
39	260	8.6	325 15	R85071	Shope fibroma virus T	9.61e-14
40	260	8.6	325 5	R27865	Rabbit fibroma virus	9.61e-14
41	240	7.9	355 15	R85073	Cowpox virus T2-equiv	6.71e-12
42	206	6.8	461 2	R07450	Rat Tumour Necrosis F	8.15e-09
43	178	5.9	595 7	R35478	Lymphocyte activation	2.45e-06
44	176	5.8	186 12	R62555	Cowpox virus Pst I/C1	3.67e-06
45	176	5.8	455 2	R07451	Human Tumour Necrosis	3.67e-06

ALIGNMENTS

RESULT 1
ID R99925 standard; Protein; 401 AA.
DE 22-APR-1997 (first entry)
DE Full length osteoclastogenesis inhibitory factor.
KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
KW Osteoporosis.
OS Homo sapiens.
FH Key Location/Qualifiers
FT Peptide 1..21
FT /note= "Signal peptide"
FT Protein 22..401
FT /note= "Mature OCIF, claim 6"
PN W08626217-A1.
PD 29-AUG-1996.
PR 20-FEB-1996; J00374.
PR 20-FEB-1995; JP-054977.
PR 21-JUL-1995; JP-207508.
PA (SNOW) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
DR WPI: 96-402320/40.
DR N-PSDB: T36685.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
PT for bone resorption control, esp. treatment of osteoporosis
PS Disclosure, Page 64-66; 183pp; Japanese.
CC This sequence represents the full length osteoclastogenesis inhibitory
CC factor (OCIF) of the invention. The OCIF has a molecular weight by
CC SDS-PAGE of 60 kD under reducing conditions and 120 kD under non-
CC reducing conditions. The protein is adsorbed onto cation-exchangers
CC or heparin and its activity is lowered after 10 mins at 70 deg.C or
CC 30 mins at 56 deg.C, and is lost after 10 mins at 90 deg.C. OCIF is
CC useful in the control of bone resorption and therefore in the
CC treatment and prevention of disorders of bone resorption, e.g.
CC osteoporosis.
SQ Sequence 401 AA:
Query Match 99.8%; Score 3024; DB 20; Length 401;
Best Local Similarity 99.8%; Pred. No. 2.31e-295;
Matches 400; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 1 MNKLCCALVFLDISIKWTTGETFPKYLHYDETSNQLLCKDEPPPTLYKQHTAKWTK 60
OY 1 MNKLCCALVFLDISIKWTTGETFPKYLHYDETSNQLLCKDEPPPTLYKQHTAKWTK 60

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Db      61 vcapcpdhyytdswhtsdeclcyapvcckelgyvkgqecnrthmrvcceckegryleiefclx 120
      |||
Qy      61 VCAPCPDHYYTDSWHTSDECLCYSPVCKELQYVKGQECNRTNHRVCECKEGRYLEIEFCLX 120
      |||
Db      121 hscpppgfgyvgaqtpentvckrcpdpdggffsnetskapcckhncsvfglllctqknat 180
      |||
Qy      121 HSCPPPGFYVGAQTPEENTVCKRCRCPDGGFFSNETSSKAPCKRHTNCSVFGLLLTQKNAT 180
      |||
Db      181 hdnicsgnsestqkcgldvrlceaeaffrfavptkftpnwlsvlvdnlpgtkvnaesveri 240
      |||
Qy      181 HDNICSGNSESTQKCGIDVTLCEAEAFFRFAPVPTKFTPNWLSVLDNLPGTKVNAESVERI 240
      |||
Db      241 krhssqegtfqlklxkhnkqdgdlvkkllqdlidlcensvgrhlganltfeqlrsime 300
      |||
Qy      241 KROHSSQEQTFQLKLXKHQNKDQDLYKKIIOIDIDLCENSVGRHIGHANLTFEQLRSIME 300
      |||
Db      301 slpgkkyvgaedieklikackpsdqllkllslvrlkngdgtlkglmhalkhsktyhfpkt 360
      |||
Qy      301 SLPGKKVGAEDIKTIKACKPSDQILKLKLSLMRKNGDDTLKGLMHALKHSTYHFPKT 360
      |||
      361 vtgsllkktlrflhsftmyklygklfllemiagnqgsvkisc1 401
      |||
Qy      361 VTOSLKKTIREFLHSFTMYKLYOKLFLEMIGNQVSVKISCL 401
      |||

RESULT 2
ID      R99932 standard; Protein; 401 AA.
AC      R99932;
DT      22-APR-1997 (first entry)
DE      Mutated OCIF, OCIF-C20S.
KW      Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
      osteoporosis.
OS      Synthetic.
FH      Key
FT      Peptide 1..21
FT      /note- "Signal peptide"
FT      Protein 22..401
FT      /note- "Mature OCIF-C20S"
FT      Misc-difference 202
FT      /label- C20S
FT      MO9626217-A1.
PD      29-AUG-1996.
PF      20-FEB-1996; J00374.
PR      20-FEB-1995; JP-054977.
PR      21-JUL-1995; JP-207508.
PA      (SNOW) SNOW BRAND MILK PROD CO LTD.
PI      Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
      Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
      WPI; 96-402320/40.
PI      N-PSDB; T33162.
PT      DNA encoding osteoclastogenesis inhibitory factor protein - useful
      for bone resorption control, esp. treatment of osteoporosis
PS      Claim 32, Page 96-98; 183pp. Japanese.
CC      This sequence represents a mutated version of the full length
      osteoclastogenesis inhibitory factor (OCIF) of the invention. This
      sequence represents OCIF-C20S in which the 20th Cys residue in the
      mature OCIF protein is substituted by Ser. The OCIF of the invention
      has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
      and 120 kD under non-reducing conditions. The protein is adsorbed onto
      cation-exchangers or heparin and its activity is lowered after 10 mins
      at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
      deg.C. OCIF is useful in the control of bone resorption and therefore
      in the treatment and prevention of disorders of bone resorption, e.g.
      osteoporosis.
SQ      Sequence 401 AA:

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Qy      1 MNKLCCALVFLDISIKKTQETFPFKYLNHDEENSHQLDCKCPPTYLKQHTAKKKT 60
      |||
Db      61 vcapcpdhyytdswhtsdeclcyapvcckelgyvkgqecnrthmrvcceckegryleiefclx 120
      |||
Qy      61 VCAPCPDHYYTDSWHTSDECLCYSPVCKELQYVKGQECNRTNHRVCECKEGRYLEIEFCLX 120
      |||
Db      121 hscpppgfgyvgaqtpentvckrcpdpdggffsnetskapcckhncsvfglllctqknat 180
      |||
Qy      121 HSCPPPGFYVGAQTPEENTVCKRCRCPDGGFFSNETSSKAPCKRHTNCSVFGLLLTQKNAT 180
      |||
Db      181 hdnicsgnsestqkcgldvrlceaeaffrfavptkftpnwlsvlvdnlpgtkvnaesveri 240
      |||
Qy      181 HDNICSGNSESTQKCGIDVTLCEAEAFFRFAPVPTKFTPNWLSVLDNLPGTKVNAESVERI 240
      |||
Db      241 krhssqegtfqlklxkhnkqdgdlvkkllqdlidlcensvgrhlganltfeqlrsime 300
      |||
Qy      241 KROHSSQEQTFQLKLXKHQNKDQDLYKKIIOIDIDLCENSVGRHIGHANLTFEQLRSIME 300
      |||
Db      301 slpgkkyvgaedieklikackpsdqllkllslvrlkngdgtlkglmhalkhsktyhfpkt 360
      |||
Qy      301 SLPGKKVGAEDIKTIKACKPSDQILKLKLSLMRKNGDDTLKGLMHALKHSTYHFPKT 360
      |||
      361 vtgsllkktlrflhsftmyklygklfllemiagnqgsvkisc1 401
      |||
Qy      361 VTOSLKKTIREFLHSFTMYKLYOKLFLEMIGNQVSVKISCL 401
      |||

RESULT 3
ID      R99931 standard; Protein; 401 AA.
AC      R99931;
DT      22-APR-1997 (first entry)
DE      Mutated OCIF, OCIF-C19S.
KW      Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
      osteoporosis.
OS      Synthetic.
FH      Key
FT      Peptide 1..21
FT      /note- "Signal peptide"
FT      Protein 22..401
FT      /note- "Mature OCIF-C19S"
FT      Misc-difference 195
FT      /label- C19S
FT      MO9626217-A1.
PD      29-AUG-1996.
PF      20-FEB-1996; J00374.
PR      20-FEB-1995; JP-054977.
PR      21-JUL-1995; JP-207508.
PA      (SNOW) SNOW BRAND MILK PROD CO LTD.
PI      Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
      Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
      WPI; 96-402320/40.
PI      N-PSDB; T33161.
PT      DNA encoding osteoclastogenesis inhibitory factor protein - useful
      for bone resorption control, esp. treatment of osteoporosis
PS      Claim 29, Page 94-96; 183pp. Japanese.
CC      This sequence represents a mutated version of the full length
      osteoclastogenesis inhibitory factor (OCIF) of the invention. This
      sequence represents OCIF-C19S in which the 19th Cys residue in the
      mature OCIF protein is substituted by Ser. The OCIF of the invention
      has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
      and 120 kD under non-reducing conditions. The protein is adsorbed onto
      cation-exchangers or heparin and its activity is lowered after 10 mins
      at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
      deg.C. OCIF is useful in the control of bone resorption and therefore
      in the treatment and prevention of disorders of bone resorption, e.g.
      osteoporosis.
SQ      Sequence 401 AA:

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Query Match 99.3%; Score 3010; DB 20; Length 401;
 Best Local Similarity 99.5%; Pred. No. 6,52e-294;
 Matches 399; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 1 mnllccalvfldisikktqetfpkylnhdeeshqlldckcpptylkhqhtakkt 60
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|||||
OY 1 MNKLCCALVFLDISIKWTQETFPFKYLYHDEETSHQLDCKCPGTYLKHCIAKAKMT 60
Db 61 vcacpdpdytswtwtdecltscpvcckelgyvkqecnrthnrveckeegryleiefcl 120
OY 61 VCACPDPHYTDSWHTSDECLTSCPVCKELGYVKQECNRTHNRVCECKEGRYLEIEFCLK 120
Db 121 hrscppgfgvvaqagpberntvcrcpdpdgsfnetsakpcrkhncsvfgllltqkgnat 180
OY 121 HRSCPFGGVVQAGPBERNTVCRCRCPDGFSSNETSSKAPCRKHTNCVSFGLLLTQKGNAT 180
Db 181 hdnicsgnsesetqkcgldvtlceeaaffrfavpckftfpmwlsyvdnlpdgtkynaesveri 240
OY 181 HDNICSGNSSESTQKCGIDVTLCEEAFFRFAVPTKFTPMWLSVLDNLPDGTKYNASVERI 240
Db 241 krqhsagqetfgllklykwhqpkddivkklldlscnsygrhghnaltfeglrslme 300
OY 241 KROHSSQETFOFLKLMKHQNKDDIVKKIIDDLCNSYGRHGHANLTFEQLRSLME 300
Db 301 slpgkkygaediektikackpsdqllkllslwrkngdgtlkglmahkshktyhfpkt 360
OY 301 SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRKNGDQDTLKGMLAHKSHKTYHFPKT 360
Db 361 vtqslkktirflhstfmyklyqklflemingvsgvskisl 401
OY 361 VTOSLKKTIIRFLHSTMYKLYQKLFLEMIGNOVOSVKISCL 401

RESULT 4
ID R99933 standard; Protein: 401 AA.
AC R99933;
DT 22-APR-1997 (first entry)
DE Mutated OCIF, OCIF-C21S.
KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
OS Osteoporosis.
FH Synthetic.
FT Key Location/Qualifiers
FT Peptide 1..21
FT /note= "Signal peptide"
FT Protein 22..401
FT /note= "Mature OCIF-C21S"
FT Misc.difference 277
FT /label= C21S
FN W09626217-A1.
PD 29-AUG-1996.
PF 20-FEB-1996; J00374.
PR 20-FEB-1995; JP-054977.
RA 21-JUL-1995; JP-207508.
PI (SNOW ) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
DR WPI: 96-402320/40.
DR N-PSDB: T33163.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
PT for bone resorption control, esp. treatment of osteoporosis
PS Claim 35; Page 98-100; 183pp; Japanese.
CC This sequence represents a mutated version of the full length
CC osteoclastogenesis inhibitory factor (OCIF) of the invention. This
CC sequence represents OCIF-C21S in which the 21st Cys residue in the
CC mature OCIF protein is substituted by Ser. The OCIF of the invention
CC has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
CC and 120 kD under non-reducing conditions. The protein is adsorbed onto
CC cation-exchangers or heparin and its activity is lowered after 10 mins
CC at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
CC deg.C. OCIF is useful in the control of bone resorption and therefore
CC in the treatment and prevention of disorders of bone resorption, e.g.
CC osteoporosis.
SQ Sequence 401 AA;
Query Match 99.2%; Score 3006; DB 20; Length 401;
Best Local Similarity 99.0%; Pred. No. 1,69e-293;
Matches 397; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

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Db 1 mnallccalvfldisikwtqetfppkylhydeetsnqlcdkcpptylykqhtactakt 60
OY 1 MNKLCCALVFLDISIKWTQETFPFKYLYHDEETSHQLDCKCPGTYLKHCIAKAKMT 60
Db 61 vcacpdpdytswtwtdecltscpvcckelgyvkqecnrthnrveckeegryleiefcl 120
OY 61 VCACPDPHYTDSWHTSDECLTSCPVCKELGYVKQECNRTHNRVCECKEGRYLEIEFCLK 120
Db 121 hrscppgfgvvaqagpberntvcrcpdpdgsfnetsakpcrkhncsvfgllltqkgnat 180
OY 121 HRSCPFGGVVQAGPBERNTVCRCRCPDGFSSNETSSKAPCRKHTNCVSFGLLLTQKGNAT 180
Db 181 hdnicsgnsesetqkcgldvtlceeaaffrfavpckftfpmwlsyvdnlpdgtkynaesveri 240
OY 181 HDNICSGNSSESTQKCGIDVTLCEEAFFRFAVPTKFTPMWLSVLDNLPDGTKYNASVERI 240
Db 241 krqhsagqetfgllklykwhqpkddivkklldlscnsygrhghnaltfeglrslme 300
OY 241 KROHSSQETFOFLKLMKHQNKDDIVKKIIDDLCNSYGRHGHANLTFEQLRSLME 300
Db 301 slpgkkygaediektikackpsdqllkllslwrkngdgtlkglmahkshktyhfpkt 360
OY 301 SLPGKKVGAEDIEKTIKACKPSDQILKLLSLWRKNGDQDTLKGMLAHKSHKTYHFPKT 360
Db 361 vtqslkktirflhstfmyklyqklflemingvsgvskisl 401
OY 361 VTOSLKKTIIRFLHSTMYKLYQKLFLEMIGNOVOSVKISCL 401

RESULT 5
ID R99942 standard; Protein: 399 AA.
AC R99942;
DT 23-APR-1997 (first entry)
DE Mutated OCIF, OCIF-CL.
KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
OS Osteoporosis.
FH Synthetic.
FT Key Location/Qualifiers
FT Peptide 1..21
FT /note= "Signal peptide"
FT Protein 22..399
FT /note= "Mature OCIF-CL"
FN W09626217-A1.
PD 29-AUG-1996.
PF 20-FEB-1996; J00374.
PR 20-FEB-1995; JP-054977.
RA 21-JUL-1995; JP-207508.
PI (SNOW ) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
DR WPI: 96-402320/40.
DR N-PSDB: T33172.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
PT for bone resorption control, esp. treatment of osteoporosis
PS Claim 62; Page 117-119; 183pp; Japanese.
CC This sequence represents a mutated version of the full length
CC osteoclastogenesis inhibitory factor (OCIF) of the invention. This
CC sequence represents OCIF-CL in which amino acids 379-380 of the
CC mature OCIF protein are deleted. The OCIF of the invention
CC has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
CC and 120 kD under non-reducing conditions. The protein is adsorbed onto
CC cation-exchangers or heparin and its activity is lowered after 10 mins
CC at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
CC deg.C. OCIF is useful in the control of bone resorption and therefore
CC in the treatment and prevention of disorders of bone resorption, e.g.
CC osteoporosis.
SQ Sequence 399 AA;
Query Match 99.1%; Score 3003; DB 20; Length 399;
Best Local Similarity 99.7%; Pred. No. 3,46e-293;
Matches 398; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 1 mnallccalvfldisikwtqetfppkylhydeetsnqlcdkcpptylykqhtactakt 60

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1 MNKLCCALVFLDISIKWTQETFPKYLHYDEETSHQLCDKCPGTYLKQCTAKMKT 60
Db 61 vcappdhyttswhtsdeclcyaspvckelgyvkqecnthrvveckeegrylelefcik 120
QY 61 VCAPCPDHYTTSWHTSDCLCYSPVCKELQYVQECNTHRVNVECKEGRYLEIEFCIK 120
Db 121 hrsccpgfyvvaqtpertvckrcpdpdggffsnetsakapcrkhtncsvfgllltqygnat 180
QY 121 HRSCEPGFVVAQTPERTVCKRCPPDGGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNAT 180
Db 181 hdnicsgnsestqkcgldvclceaeaffrfaupkftpnwlsylvdnlpjgkynaesveri 240
QY 181 HDNICSGNSESTQKCGIDVTLCEAEAFFRFAVPTKFTPNWLSVLDNLPJTKVNAESVERI 240
Db 241 krqhsqgeqtfqllkvwkhnkdqdvkklldqdlceansvgrhghauntfeqlrsime 300
QY 241 KRQHSQGEQTFQLLKWKNQNDQIVKKIIDDLCENSVO RHIGHANLTFEQLRSIME 300
Db 301 slpgrkxvgaediektikackrpsdqllkllslwrknngddtllgimhalkhsktyhfpkt 360
QY 301 SLPGKXVGAEDIEKTIKACKRPSDQILKLISLMRKNGDDTLKGLMHALKHSKTYHFPKT 360
Db 361 vtgsllkktirflhsftmyklygklflemignvgsvkisl 399
QY 361 VTGSLKKTIRFLHSFTMYKLYGKLFLEMIGNVO SVKISL 399

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RESULT 6
ID R99934 standard; Protein: 401 AA.

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AC R99934;
DE 22-APR-1997 (first entry)
DE Mutated OCIF, OCIF-C22S.
KM Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
OS osteoporosis.
OS Synthetic.
FH Key 1.21 Location/Qualifiers
FT Peptide 1..21
FT /note- "Signal peptide"
FT Protein 22..401
FT /note- "Mature OCIF-C22S"
FT MISC_difference 277
FT /label- C22S
PD WO9626217-A1.
PD 29-AUG-1996.
PD 20-FEB-1996; J00374.
PR 20-FEB-1995; JP-054977.
PR 21-JUL-1995; JP-207508.
PA (SNOW) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
DR WPI: 96-402320/40.
DR N-PSDB: T33164.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
PT for bone resorption control, esp. treatment of osteoporosis
PS Claim 38: Page 100-102; 183pp; Japanese.
PS This sequence represents a mutated version of the full length
PS osteoclastogenesis inhibitory factor (OCIF) of the invention. This
PS sequence represents OCIF-C22S in which the 22nd Cys residue in the
PS mature OCIF protein is substituted by Ser. The OCIF of the invention
PS has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
PS and 120 kD under non-reducing conditions. The protein is adsorbed onto
PS cation-exchangers or heparin and its activity is lowered after 10 mins
PS at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
PS deg.C. OCIF is useful in the control of bone resorption and therefore
PS in the treatment and prevention of disorders of bone resorption, e.g.
PS osteoporosis.
CC Sequence 401 AA:

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Query Match 99.1%; Score 3004; DB 20: Length 401;
Best Local Similarity 99.3%; Pred. No. 2,73e-293;
Matches 398; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

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Db 1 mnllccalvfldisikwtcgetfpkylyhydeetsbqlldckcpptylkqctakwkt 60
QY 1 MNKLCCALVFLDISIKWTQETFPKYLHYDEETSHQLCDKCPPTIYLKQCTAKMKT 60
Db 61 vcappdhyttswhtsdeclcyaspvckelgyvkqecnthrvveckeegrylelefcik 120
QY 61 VCAPCPDHYTTSWHTSDCLCYSPVCKELQYVQECNTHRVNVECKEGRYLEIEFCIK 120
Db 121 hrsccpgfyvvaqtpertvckrcpdpdggffsnetsakapcrkhtncsvfgllltqygnat 180
QY 121 HRSCEPGFVVAQTPERTVCKRCPPDGGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNAT 180
Db 181 hdnicsgnsestqkcgldvclceaeaffrfaupkftpnwlsylvdnlpjgkynaesveri 240
QY 181 HDNICSGNSESTQKCGIDVTLCEAEAFFRFAVPTKFTPNWLSVLDNLPJTKVNAESVERI 240
Db 241 krqhsqgeqtfqllkvwkhnkdqdvkklldqdlceansvgrhghauntfeqlrsime 300
QY 241 KRQHSQGEQTFQLLKWKNQNDQIVKKIIDDLCENSVO RHIGHANLTFEQLRSIME 300
Db 301 slpgrkxvgaediektikackrpsdqllkllslwrknngddtllgimhalkhsktyhfpkt 360
QY 301 SLPGKXVGAEDIEKTIKACKRPSDQILKLISLMRKNGDDTLKGLMHALKHSKTYHFPKT 360
Db 361 vtgsllkktirflhsftmyklygklflemignvgsvkisl 401
QY 361 VTGSLKKTIRFLHSFTMYKLYGKLFLEMIGNVO SVKISL 401

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RESULT 7
ID R99935 standard; Protein: 401 AA.

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AC R99935;
DE 22-APR-1997 (first entry)
DE Mutated OCIF, OCIF-C23S.
KM Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
OS osteoporosis.
OS Synthetic.
FH Key 1.21 Location/Qualifiers
FT Peptide 1..21
FT /note- "Signal peptide"
FT Protein 22..401
FT /note- "Mature OCIF-C23S"
FT MISC_difference 400
FT /label- C23S
PD WO9626217-A1.
PD 29-AUG-1996.
PD 20-FEB-1996; J00374.
PR 20-FEB-1995; JP-054977.
PR 21-JUL-1995; JP-207508.
PA (SNOW) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
DR WPI: 96-402320/40.
DR N-PSDB: T33165.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
PT for bone resorption control, esp. treatment of osteoporosis
PS Claim 41: Page 103-105; 183pp; Japanese.
PS This sequence represents a mutated version of the full length
PS osteoclastogenesis inhibitory factor (OCIF) of the invention. This
PS sequence represents OCIF-C23S in which the 23rd Cys residue in the
PS mature OCIF protein is substituted by Ser. The OCIF of the invention
PS has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
PS and 120 kD under non-reducing conditions. The protein is adsorbed onto
PS cation-exchangers or heparin and its activity is lowered after 10 mins
PS at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
PS deg.C. OCIF is useful in the control of bone resorption and therefore
PS in the treatment and prevention of disorders of bone resorption, e.g.
PS osteoporosis.
CC Sequence 401 AA:

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Query Match 98.9%; Score 2996; DB 20: Length 401;
Best Local Similarity 99.3%; Pred. No. 1.84e-292;
Matches 398; Conservative 2; Mismatches 2; Indels 0; Gaps 0;


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Db      61 yspvckelgyvkgecntrhnrvceckegrylelefcikhsrccpgfygvagatperntv 120
      |||
Qy      82 ycspsvckelqoyvkoecncrhnrvceckegrylelefcikhsrccpgfygvagatperntv 141
      |||
Db      121 ckrccpddgfssnetskacprkhnrcsvfg11ltqkgnatdnscnsesctqkcidv1 180
      |||
Qy      142 ckrccpddgfssnetskacprkhnrcsvfg11ltqkgnatdnscnsesctqkcidv1 201
      |||
Db      181 cceaffirfvpkffcpnwlsvldnlpqtkvnaesverikrghsagqetfg11k1wkhq 240
      |||
Qy      202 cceaffrfauprtkftpnmlsvldnlpqtkvnaesverikrghsagqetfg11k1wkhq 261
      |||
Db      241 kqddakkk1qddidlcensvqrhghna1tfeqlrs1mes1pgkxvgaed1ekt1ackp 300
      |||
Qy      262 kqddakkk1qddidlcensvqrhghna1tfeqlrs1mes1pgkxvgaed1ekt1ackp 321
      |||
Db      301 sdq1k1k1sw1k1kngdgt1k1g1m1h1k1sk1tyh1fk1v1t1g1s1k1k1t1f1h1s1f1m1y1k1 360
      |||
Qy      322 s0o1k1k1s1m1r1k1kngd0t1k1g1m1h1k1sk1tyh1fk1v1t1g1s1k1k1t1f1h1s1f1m1y1k1 381
      |||
      361 qk1f1em1g1n1g1v1k1s1c1 380
      |||
Qy      382 oK1f1em1g1n1o1v1s1k1s1c1 401
      |||

RESULT 10
ID      R99943 standard; Protein: 351 AA.
AC      R99943;
DE      23-APR-1997 (first entry)
KW      Mutated OCIF, OCIF-CC.
OS      Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
        osteoporosis.
FH      Key
FT      Peptide 1..21 Location/Qualifiers
FT      /note- "signal peptide"
FT      Protein 22..351
FT      /note- "Mature OCIF-CC"
PN      WO9626217-A1.
PD      29-AUG-1996.
PR      20-FEB-1996: J00374.
PR      20-FEB-1995: JP-054977.
PR      21-JUL-1995: JP-207508.
PA      (SNOW) SNOW BRAND MILK PROD CO LTD.
PI      Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI      Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
PI      WPI: 96-403320/40.
DR      N-PSDB: T33173.
CC      DNA encoding osteoclastogenesis inhibitory factor protein - useful
        for bone resorption control, esp. treatment of osteoporosis
        Ps Claim 65; Page 119-121; 183pp; Japanese.
CC      This sequence represents a mutated version of the full length
        osteoclastogenesis inhibitory factor (OCIF) of the invention. This
        sequence represents OCIF-CC in which amino acids 331-380 of the
        mature OCIF protein are deleted. The OCIF of the invention
        has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
        and 120 kD under non-reducing conditions. The protein is adsorbed onto
        cation-exchangers or heparin and its activity is lowered after 10 mins
        at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
        deg.C. OCIF is useful in the control of bone resorption and therefore
        in the treatment and prevention of disorders of bone resorption, e.g.
        osteoporosis.
SQ      Sequence 351 AA:

Query Match      87.3%; Score 2644; DB 20; Length 351;
Best Local Similarity 99.7%; Pred. No. 5,25e-256;
Matches 350; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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      |||
Qy      61 vCAPCPDHTYIDSWHISDECLYCSPVCKELQYVkoecncrhnrvceckegrylelefcik 120
      |||
Db      121 hrsccppgfygvagatperntvckrcpddgfssnetskacprkhnrcsvfg11ltqkgnat 180
      |||
Qy      121 HRSccpPGGVVQAGTPERNYTCRKCPDGFSSNETSSKAPCKRHNCsvfGLLTQKGNAT 180
      |||
Db      181 hdn1csngsnetqkcg1dv1lceaffirfayvpxkffcpnwlsvldnlpqtkvnaesver1 240
      |||
Qy      181 HDN1CSNGSNETQKCG1DV1LCEAFFRFAUPRTKFTPNMLSVLDNLPQTKVNAESVER1 240
      |||
Db      241 krcpssagqetfg11k1wkhqkdd1vkk1i1qddidlcensvqrhghna1tfeqlrs1me 300
      |||
Qy      241 KROHSSDQOTRQ1LK1KMHONKODIVK1I1QDDIDLCENSvQRHGHANLTFEQLRS1ME 300
      |||
Db      301 slp1k1k1vgaed1ekt1ackp1sdq1k1k1sw1k1kngdgt1k1g1m1h1k1sk1tyh1fk1v1t1g1s1k1k1t1f1h1s1f1m1y1k1 351
      |||
Qy      301 SLp1K1K1VGAED1EKT1ACKP1SDQ1K1K1SW1K1KNGDGT1K1G1M1H1K1SK1TYH1FK1V1T1G1S1K1K1T1F1H1S1F1M1Y1K1 351
      |||

RESULT 11
ID      R99936 standard; Protein: 360 AA.
AC      R99936;
DE      23-APR-1997 (first entry)
KW      Mutated OCIF, OCIF-DCR1.
OS      Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
        osteoporosis.
FH      Key
FT      Peptide 1..21 Location/Qualifiers
FT      /note- "signal peptide"
FT      Protein 22..360
FT      /note- "Mature OCIF-DCR1"
FT      MISC.difference 22..23
FT      /note- "Position of deletion, delta 2-42"
PN      WO9626217-A1.
PD      29-AUG-1996.
PR      20-FEB-1996: J00374.
PR      20-FEB-1995: JP-054977.
PR      21-JUL-1995: JP-207508.
PA      (SNOW) SNOW BRAND MILK PROD CO LTD.
PI      Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI      Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
PI      WPI: 96-403320/40.
DR      N-PSDB: T33166.
CC      DNA encoding osteoclastogenesis inhibitory factor protein - useful
        for bone resorption control, esp. treatment of osteoporosis
        Ps Claim 44; Page 105-107; 183pp; Japanese.
CC      This sequence represents a mutated version of the full length
        osteoclastogenesis inhibitory factor (OCIF) of the invention. This
        sequence represents OCIF-DCR1 in which amino acids 2-42 of the
        mature OCIF protein are deleted. The OCIF of the invention
        has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
        and 120 kD under non-reducing conditions. The protein is adsorbed onto
        cation-exchangers or heparin and its activity is lowered after 10 mins
        at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
        deg.C. OCIF is useful in the control of bone resorption and therefore
        in the treatment and prevention of disorders of bone resorption, e.g.
        osteoporosis.
SQ      Sequence 360 AA:

Query Match      83.8%; Score 2539; DB 20; Length 360;
Best Local Similarity 98.3%; Pred. No. 3.84e-245;
Matches 341; Conservative 1; Mismatches 4; Indels 1; Gaps 1;

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Db      61 vcapcpdhtyidswhsdeclcyvspckelgyvkgecntrhnrvceckegrylelefcik 120

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Qy      115 IEFCLKHSRCCPGGVVQAGTPERNYTCRKCPDGFSSNETSSKAPCKRHNCsvfGLLT 174

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Db	134	qkgnatndhncsgnssctqkcgldvtlccaeafrfayrpkftrpnvslvvdnipytkvna	193
Qy	175	QKGNATHDNLTCSGNSSESTOKCGIDVTLCEAEAFRFAVPTKFTFNMLSVLDNIPGRKVA	234
Db	194	esvverikrghsqsgqtfgjllkvwknpkqgdqdkklllqgdldcensvgrhignatlfeg	253
Qy	235	ESVERIKRQHSQSGQTQQLLKKMKHOKKODDIYKKIIGDLDCENSVGRHIGNATLFEG	294
Db	254	lrsimeslpqkxvgaedlektlckxpsdqglkllslwrlngdgdtkyglmahlxst	313
Qy	295	LRSIMESLPQKXVGAEDIKTKIKACKPSDQGLKLLSLWRIRKNGDQDTLGLMHALXKST	354
Db	314	yhfktvtsglkktrflbfhftmwykylqkllflmignvqsvyiscl	360
Qy	355	YHFKTVTQSLKTRFLBHSFTMKYKQKLFELMIGNOVSVKISCL	401
RESULT	12		
	R99949	standard; Protein; 321 AA.	
	R99949:		
	23-APR-1997	(first entry)	
DE	Mutated OCIF, OCIF-C5ph.		
KM	Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;		
KM	osteoporosis.		
OS	Synthetic.		
PH	Key	Location/Qualifiers	
FT	Peptide	1..21	
FT	/note="Signal peptide"		
FT	Protein	22..321	
FT	/note="Mature OCIF-C5ph"		
PN	MO9626217-A1.		
PD	29-AUG-1996.		
PF	20-FEB-1996:	J00374.	
PR	20-FEB-1995:	JP-034977.	
PA	21-JUL-1995:	JP-207508.	
PI	(SNOW) SNOW BRAND MILK PROD CO LTD.		
PI	Goto M, Higashino K, Kobayashi F, Mochizuki S, Morinaga T:		
PI	Nakagawa N, Shima K, Tsuda E, Ueda M, Yano K, Yasuda H;		
DR	WPI: 96-403220/40.		
DR	N-PSDB: T33179.		
PT	DNA encoding osteoclastogenesis inhibitory factor protein - useful		
PT	for bone resorption control, esp. treatment of osteoporosis		
PS	Claim 83; Page 128-129; 183pp; Japanese.		
CC	This sequence represents a mutated version of the full length		
CC	osteoclastogenesis inhibitory factor (OCIF) of the invention. This		
CC	sequence represents OCIF-C5ph in which amino acids 298-380 of the mature		
CC	OCIF protein are replaced by Ser-Leu-Asp. These changes are caused by		
CC	the introduction of a restriction site in the DNA encoding this protein.		
CC	The OCIF of the invention has a molecular weight by SDS-PAGE of 60 kD		
CC	under reducing conditions and 120 kD under non-reducing conditions. The		
CC	protein is adsorbed onto cation-exchangers or heparin and its activity is		
CC	lowered after 10 mins at 70 deg.C or 30 mins at 56 deg.C, and is lost		
CC	after 10 mins at 90 deg.C. OCIF is useful in the control of bone		
CC	resorption and therefore in the treatment and prevention of disorders		
CC	of bone resorption, e.g. osteoporosis.		
CC	Sequence 321 AA:		
Query Match	79.0%:	Score 2394:	DB 20; Length 321;
Best Local Similarity	99.7%:	Prod. No. 3.78e-230:	
Matches 317; Conservative	1;	Mismatches 0;	Indels 0; Gaps 0;
Db	1	mmnlcalavfidisikwtgctfipkylvlydeetsnqllldckcpqgtylkghcrtakwt	60
Qy	1	MNKLICALVFLDISIKWTTQETPRPYLYLYDETSNQLLDCKCPGTYLKQHCRTAKWT	60
Db	61	vcabpdpdhyytcdsvhtsdecllycsprvckelqyvkqecnrthnrvceckegrylalefclx	120
Qy	61	VCACPDPHHYTDSDHTDECLYCSPVCKELQYVKQECNRTHNRVCECKEGRYLEIFCLX	120
Db	121	hrsppgfygvvgaatparrntvckrcpdpdggfnsnetsakapcrkhtnsvvfgllltcgnat	180
Qy	121	HRSCPDPGFGVVAQTPRRNTVCKRCPDGPFNSNETSSAKAPCRKHTNSVFGLLTQGNAT	180

D	b	181	hndicgsnsestqkcgivdtclceaffrfavpklfpwnjlsvvdhlpjtknaesveri	240
Q	y	181	HDNICGSNESTQKCGIDVTLCEEAFRFVAPTKFPMNLSTVLVNDLPGTKNAESVERI	240
D	b	241	krhhsqectfllkllwkhqmkddvkkllqgdlcleensvgrhshantfeqlrslme	300
Q	y	241	KRHSQECTFLKLLWKHQKDDIVAKKLIQDIDLCENSVGRHSHANTFEQLRSLME	300
D	b	301	slpkkvgaediektika	318
Q	y	301	SLPKKVGAEDIEKTIKA	318
RESULT 13				
ID			R99938 standard; Protein; 360 AA.	
AC			R99938:	
DT			23-APR-1997 (first entry)	
DE			Mutated OCIF, OCIF-DCR3.	
KW			Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption; osteoporosis.	
OS			Synthetic.	
FS			Key	
FT			Peptide	Location/Qualifiers
FT			/note= "Signal peptide"	1..21
FT			Protein	22..360
FT			/note= "Mature OCIF-DCR3"	
FT			Misc_difference	105..106
FT			/note= "Position of deletion, delta 85-122"	
PN			W09626217-11.	
PD			28-AUG-1996.	
PF			20-FEB-1996; J00374.	
PR			20-FEB-1995; JP-054977.	
PR			21-JUL-1995; JP-207508.	
PA			(SNOW) SNOW BRAND MILK PROD CO LTD.	
PI			Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;	
PI			Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;	
DI			WPI; 96-402320/40.	
DR			N-PSDB; T31168.	
PT			DNA encoding osteoclastogenesis inhibitory factor protein - useful	
PT			for bone resorption control, esp. treatment of osteoporosis	
PS			ClaIn 50; Page 109-111; 183pp; Japanese.	
CC			This sequence represents a deleted version of the full length	
CC			osteoclastogenesis inhibitory factor (OCIF) of the invention. This	
CC			sequence represents OCIF-DCR3 in which amino acids 85-122 of the	
CC			mature OCIF protein are deleted. The OCIF of the invention	
CC			has a molecular weight by SDS-PAGE of 60 kD under reducing conditions	
CC			and 120 kD under non-reducing conditions. The protein is adsorbed onto	
CC			cation-exchangers or heparin and its activity is lowered after 10 mins	
CC			at 70 deg C or 30 mins at 56 deg C, and is lost after 10 mins at 90	
CC			deg C. OCIF is useful in the control of bone resorption and therefore	
CC			in the treatment and prevention of disorders of bone resorption, e.g.	
CC			osteoporosis	
CC			Sequence 360 AA:	
Query Match 75.3%; Score 2282; DB 20; Length 360;				
Best Local Similarity 90.2%; Pred. No. 1,42e-218;				
Matches 359; Conservative 1; Mismatches 0; Indels 38; Gaps 1				
D	b	1	mmnlccalvfidisikwtcgecfpkylyhdeetsqllcdkcpptyljkhctaaxkt	60
Q	y	1	MNKLCCALVFDIDISIKWTEFTFPKYLHYDETSQQLCDKCPGTYLKHCTAAKWT	60
D	b	61	vcpapcdhyttsyhtlseclyscpvckelgykgeenthrnvc-----	105
Q	y	61	VCAPCDHYTTSYHTSECLYSPVCKELGYKGEENTHRNVC-----	105
D	b	106	-----rcpgdfsnetskapcrkthnsvfgllltgkgnat	142
Q	y	121	HRCSPGFGFVAGTPEKNYCKRCRPGGFSNETSKAPCRKHTNCSVGLLLTGKGNAT	180
D	b	143	hndicgsnsestqkcgivdtclceaffrfavpklfpwnjlsvvdhlpjtknaesveri	202
Q	y	181	HDNICGSNESTQKCGIDVTLCEEAFRFVAPTKFPMNLSTVLVNDLPGTKNAESVERI	240

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Db 203 krqhsagqetfqlklkwhqndqgdvkkllqgldlceasvgrhighanltfegrlsime 262
    |||
Qy 241 KROHSSQEQTFQLKLKWHQNDQDIYKKIIOIDIDLCENSVO RHIGHANLTFEQLSLME 300
    |||
Db 263 slpgkkygaediektikackpsdqqlklslwrkngdgtlkglmhalhsktyhfekt 322
    |||
Qy 301 SLPGKKGAEIDIEKTIRKCKPSDQQLKLSLWRIRKNGDQDTLKGMLHALKRSKTYHFEXT 360

Db 323 vtqslkktirflhsftmyklyqklflemignqvsvskl 360
    |||
Qy 361 VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVSVSKI 398

RESULT 14
ID R99937 standard; Protein; 359 AA.
AC R99937;
DE Mutated OCIF, OCIF-DCR4.
KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
   osteoporosis.
OS Synthetic.
FH Key Location/Qualifiers
FT Peptide 1..21
FT /note- "Signal peptide"
FT Protein 22..359
FT /note- "Mature OCIF-DCR4"
FT MISC.difference 143..144
FT /note- "Position of deletion, delta 123-164"
PN W09626217-A1.
PD 29-AUG-1996.
PF 20-FEB-1996; J00374.
PR 20-FEB-1995; JP-054977.
PR 21-JUL-1995; JP-207508.
PA (SNOW ) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
PI WPI: 96-402320/40.
DR N-PSDB: T33169.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
   for bone resorption control, esp. treatment of osteoporosis
PS Claim 53; Page 111-113; 183pp; Japanese.
CC This sequence represents a mutated version of the full length
   osteoclastogenesis inhibitory factor (OCIF) of the invention. This
   sequence represents OCIF-DCR4 in which amino acids 123-164 of the
   mature OCIF protein are deleted. The OCIF of the invention
   has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
   and 120 kD under non-reducing conditions. The protein is adsorbed onto
   cation-exchangers or heparin and its activity is lowered after 10 mins
   at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
   deg.C. OCIF is useful in the control of bone resorption and therefore
   in the treatment and prevention of disorders of bone resorption, e.g.
   osteoporosis.
CC Sequence 359 AA:
SQ

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Qy 181 HDNICSNSESTOKCGIDVTLCEAFRFAVPTKTPNMLSVLVDNLPCTKVAESVERI 240
    |||
Db 199 krqhsagqetfqlklkwhqndqgdvkkllqgldlceasvgrhighanltfegrlsime 258
    |||
Qy 241 KROHSSQEQTFQLKLKWHQNDQDIYKKIIOIDIDLCENSVO RHIGHANLTFEQLSLME 300
    |||
Db 259 slpgkkygaediektikackpsdqqlklslwrkngdgtlkglmhalhsktyhfekt 318
    |||
Qy 301 SLPGKKGAEIDIEKTIRKCKPSDQQLKLSLWRIRKNGDQDTLKGMLHALKRSKTYHFEXT 360

Db 319 vtqslkktirflhsftmyklyqklflemignqvsvskl 359
    |||
Qy 361 VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQVSVSKI 401

RESULT 15
ID R99937 standard; Protein; 359 AA.
AC R99937;
DE Mutated OCIF, OCIF-DCR2.
KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
   osteoporosis.
OS Synthetic.
FH Key Location/Qualifiers
FT Peptide 1..21
FT /note- "Signal peptide"
FT Protein 22..359
FT /note- "Mature OCIF-DCR2"
FT MISC.difference 63..64
FT /note- "Position of deletion, delta 43-84"
PN W09626217-A1.
PD 29-AUG-1996.
PF 20-FEB-1996; J00374.
PR 20-FEB-1995; JP-054977.
PR 21-JUL-1995; JP-207508.
PA (SNOW ) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
PI WPI: 96-402320/40.
DR N-PSDB: T33167.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
   for bone resorption control, esp. treatment of osteoporosis
PS Claim 47; Page 107-109; 183pp; Japanese.
CC This sequence represents a mutated version of the full length
   osteoclastogenesis inhibitory factor (OCIF) of the invention. This
   sequence represents OCIF-DCR2 in which amino acids 43-84 of the
   mature OCIF protein are deleted. The OCIF of the invention
   has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
   and 120 kD under non-reducing conditions. The protein is adsorbed onto
   cation-exchangers or heparin and its activity is lowered after 10 mins
   at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
   deg.C. OCIF is useful in the control of bone resorption and therefore
   in the treatment and prevention of disorders of bone resorption, e.g.
   osteoporosis.
CC Sequence 359 AA:
SQ

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Query Match 74.0%; Score 2242; DB 20; Length 359;
Best Local Similarity 89.0%; Pred. No. 1,92e-214;
Matches 357; Conservative 1; Mismatches 1; Indels 42; Gaps 1;

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Query Match 73.2%; Score 2218; DB 20; Length 359;
Best Local Similarity 89.4%; Pred. No. 5.77e-212;
Matches 312; Conservative 5; Mismatches 26; Indels 6; Gaps 6;

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OY 233 NAESEVERIKROHSSOEQTFQLKLMKHQNKDODIVKTIQDIDLCENSVOHRIGHANLTF 292
DB 251 eglrsimeslpgkxvgaediektlkacbpsdglklslwrkngdqlkglmhalkhs 310
OY 293 EQLRSIMESLPGKXVGAEDIEKTIKACKPSDQILKLSLWRIKNGDDPTLKGLMHALKHS 352
DB 311 ktyhfpkvtgslkktlrlflhsftmyklyhklflemignvqsvklscl 359
OY 353 KTYHFPKVTGSLKKTIRFLHSFTMYKLYOKLLEMIGNVOVSVKISCL 401

Search completed: Wed Aug 20 09:41:58 1997
Job time : 60 secs.